

Notice of Allowability

Application No.

10/810,618

Applicant(s)

INOUE, TOSHIAKI

Examiner

Joni Hsu

Art Unit

2628

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to papers received June 6, 2006.
2. ☒ The allowed claim(s) is/are 1-14.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 6, 2006 has been entered.

Response to Amendment

2. Applicant's arguments, see pages 10-11, filed June 6, 2006, with respect to Claims 1-14 have been fully considered and are persuasive. The 35 U.S.C. 103(a) rejections of Claims 1-4 and 8-11 and the objections of Claims 5-7 and 12-14 has been withdrawn.

3. Applicant argues that Toksvig (US006870542B2) is directed to providing a graphics processing system that filters oversampled data without requiring additional memory or memory access operation. However, the effect of Toksvig's disclosure does not avoid an increase in an amount of data that is stored in the frame memory in the manner that results from the advantageous features of embodiments of the instant application's disclosure (page 10, paragraph 2).

In reply, the Examiner agrees, as discussed below.

Allowable Subject Matter

4. Claims 1-14 are allowed.

The following is an examiner's statement of reasons for allowance:

5. The prior art taken singly or in combination do not teach or suggest a driver including a redundant pixel embedding circuit to embed data as redundant pixels into an image line read from the frame memory so as to produce the video output signal, the data corresponding to portions of the video input signal irrespective of data values of the portions, as recited in Claims 1, 3, 8, and 10. Claims 2, 4-7, 9, and 11-14 depend from these claims, and therefore also contain allowable subject matter.

6. The closest prior art (APA) teaches a digital image processing device for signal-processing a video input signal and supplying a video input signal and supplying a video output signal to a display panel, comprising a signal processing unit (602, Figure 6) to process this video input signal; a redundant pixel embedding circuit (603) to embed data as redundant pixels into an image line read from the signal processing section. The image line in which dummy data is embedded, after having been stored in a frame memory (604), is transferred to the driver (605) and the driver outputs a video signal (page 3, lines 3-12). However, APA does not teach that the processed video input signal from the signal processing unit is first stored in the frame memory, and a driver including a redundant pixel embedding circuit embeds data as redundant pixels into an image line read from the frame memory, and the data corresponds to portions of the video input signal irrespective of data values of the portions.

7. Another prior art (Kitagishi US005736972A) teaches embedding data as redundant pixels into an image line read from the frame memory (Col. 5, lines 1-8). However, Kitagishi does not teach that the frame memory stores the processed video input signal from the signal processing unit; that the redundant pixel embedding circuit is included in a driver; and that the data corresponds to portions of the video input signal irrespective of data values of the portions.

8. Another prior art (Toksvig US006870542B2) teaches that the processed video input signal from the signal processing unit (410, Figure 4) is first stored in the frame memory (415; Col. 5, lines 59-58), and the driver (420) including a filter (430) filters the graphics data read from the frame memory (Col. 6, lines 3-14). However, Toksvig does not teach a redundant pixel embedding circuit.

9. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Prior Art of Record

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. APA teaches a redundant pixel embedding section (page 3, lines 5-8).

2. Kitagishi (US005736972A) teaches embedding data as redundant pixels into an image line read from the frame memory (Col. 5, lines 1-8).
3. Toksvig (US006870542B2) teaches a driver (420) including a filter (430) filters the graphics data read from the frame memory (Col. 6, lines 3-14).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joni Hsu whose telephone number is 571-272-7785. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on 571-272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JH


ULKA CHAUHAN
SUPERVISORY PATENT EXAMINER